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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,017	02/26/2004	Denis Babin	MMID 2001	3536

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CANADA

EXAMINER	
EWALD, MARIA VERONICA	

ART UNIT	PAPER NUMBER
1722	

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.**	**Applicant(s)**	
	10/786,017	BABIN ET AL.	
	Examiner	**Art Unit**	
	Maria Veronica D. Ewald	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) *1-7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/04&9/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

13. Claims 1 – 7 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 30, 2006.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8 – 9 and 11 – 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Choi, et al. (U.S. 2002/0149135 A1). Choi, et al. teach an injection molding apparatus comprising: a hot runner system for supplying a laminar flowing material, the hot runner system having an upstream melt passage (figures 1 – 2; paragraph 0032), a plurality of intermediary melt passages downstream from the upstream melt passage (figure 8), and for at least one intermediary melt passage, an associated pair of downstream melt passages downstream from the intermediary melt passage (figure 8); for the upstream melt passage and the at least one intermediary melt passage, a flow path for orienting

the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (figure 8; paragraphs 0032, 0047, 0054 – 0056); and a plurality of hot runner nozzles in communication with and downstream from the downstream melt passages (paragraph 0032); wherein the apparatus is further comprised of a manifold having the hot runner system (paragraph 0032, 0056 – 0057).

With respect to claims 11 – 12, the reference further teaches that the flow is non-planar (paragraph 0047); wherein the flow path comprises a sufficient amount of bending to rotate the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (figure 8; paragraphs 0056 – 0057, 0060, 0065).

Claims 8 – 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Beaumont, et al. (U.S. 6,503,438). Beaumont, et al. teach an injection molding apparatus comprising: a hot runner system for supplying a laminar flowing material, the hot runner system having an upstream melt passage (column 11, lines 45 – 55), a plurality of intermediary melt passages downstream from the upstream melt passage (figure 8), and for at least one intermediary melt passage, an associated pair of downstream melt passages downstream from the

intermediary melt passage (figure 8); for the upstream melt passage and the at least one intermediary melt passage, a flow path for orienting the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (figure 8; column 11, lines 65 – 67; column 12, lines 13 – 40); and a plurality of hot runner nozzles in communication with and downstream from the downstream melt passages (column 2, lines 15 – 20); wherein the apparatus is further comprised of a manifold having the hot runner system (column 2, lines 15 – 20); wherein the apparatus is further comprised of a stack mold having the hot runner system (column 2, lines 20 – 25).

With respect to claims 11 – 15, the reference further teaches that the flow is non-planar (figures 5A – 5D; column 2, lines 60 – 67); wherein the flow path comprises a sufficient amount of bending to rotate the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (figure 8); wherein the apparatus is further comprised of a flow rotator for installing in the hot runner system to provide a bending portion of the flow path (item 210 – figures 9A – 9D; column 9, lines 30 – 40; column 14, lines 1 – 15); wherein the bending portion comprises a sufficient amount of bending to rotate the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional

asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (column 13, lines 45 – 65; column 14, lines 1 – 15); wherein the flow rotator receives the laminar flowing material from the upstream melt passage (figures 9A – 9D); the bending portion comprises a pair of downstream outlets and a branch for bifurcating the bending portion into the pair of downstream outlets (figures 9A – 9D); the pair of downstream outlets comprises a distinct associated downstream outlet for the at least one intermediary melt passage (figures 8, 9A – 9D; column 12, lines 40 – 65); for the at least one intermediary melt passage, the distinct associated downstream outlet discharges the laminar flowing material into the intermediary melt passage (figures 9A – 9D); and for the at least one intermediary melt passage, the distinct associated downstream outlet is oriented relative to the intermediary melt passage to rotate the cross-sectional asymmetrical condition of the laminar flowing material such that the cross-sectional asymmetric condition is substantially equally divided between the associated two downstream melt passages (column 11, lines 54 – 64).

With respect to claims 16 – 18, the reference further teaches that the flow-rotator receives the laminar flowing material from the intermediary melt passage and discharges the laminar flowing material into the intermediary melt passage (column 12, lines 40 – 50); wherein the flow rotator comprises a one-piece body having an inlet for receiving the laminar flowing material and at least one outlet for discharging the laminar flowing material, the inlet being connected to the outlet by the curved path; and the one piece body is configured such to fit within

the hot runner system (item 210 – figures 9A – 9D); wherein the one-piece body comprises an integral heating element (column 1, lines 40 – 50; column 5, lines 30 – 40).

With respect to claims 19 – 21, Beaumont, et al. teach in a hot runner system for supplying a laminar flowing material, the hot runner system having an upstream melt passage (figure 8), a pair of intermediary melt passages downstream from the upstream melt passage and for at least one intermediary melt passage, an associated pair of downstream melt passages downstream from the at least one intermediary melt passage (figure 8); a flow rotator for rotating a cross-sectional asymmetrical condition of a laminar flowing material in the hot runner system (item 210 – figures 9A – 9D), the flow rotator comprising: an inlet for receiving the laminar flowing material (figures 9A – 9D); at least one outlet for discharging the laminar flowing material (figures 9A – 9D); and a bending path for orienting the at least one outlet relative to the inlet to rotate the cross-sectional asymmetrical condition of the laminar flowing material such that the cross-sectional asymmetrical condition is substantially equally divided between the two downstream portions (figures 9A – 9D; column 12, lines 40 – 65); wherein the at least one outlet is positioned to discharge the laminar flowing material into the at least one intermediary melt passage, and is oriented relative to the at least one intermediary melt passage such that the cross-sectional asymmetrical condition in the at least one intermediary melt passage is substantially equally divided between the associated pair of downstream melt passages (column 13, lines 45 – 65); wherein the at least one outlet comprises a

pair of outlets; and each outlet in the pair of outlets, is positioned to discharge the laminar flowing material into an associated intermediary melt passage in the pair of intermediary melt passages, and is oriented relative to the associated intermediary melt passage such that the cross-sectional asymmetrical condition in the associated intermediary melt passage is substantially equally divided between the associated pair of downstream melt passages (column 13, lines 45 – 65; column 14, lines 1 – 15).

With respect to claims 22 – 25, Beaumont, et al. further teach that the bending path is offset from a plane including the upstream melt passage, the pair of intermediary melt passages downstream from the upstream melt passage, and the associated pair of downstream melt passages for each intermediary melt passage (figures 9A – 9D); wherein the bending path comprises a sufficient amount of bending to rotate the cross-sectional asymmetrical condition such that the cross-sectional asymmetrical condition is substantially equally divided between the two downstream portions (figures 9A – 9D); wherein the flow rotator is further comprised of a one- piece body, wherein the inlet, the branch, the bending path and the two outlets are formed in the one-piece body; wherein the one-piece body comprises an integral heating element (column 1, lines 40 – 50; column 5, lines 30 – 40; column 11, lines 55 – 60).

Claims 8 – 9, 11 – 16 and 19 – 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Bouti (U.S. 6,382,528). Bouti teaches an injection molding apparatus comprising: a hot runner system for supplying a laminar flowing

material, the hot runner system having an upstream melt passage (column 3, lines 5 – 9), a plurality of intermediary melt passages downstream from the upstream melt passage (figure 4), and for at least one intermediary melt passage, an associated pair of downstream melt passages downstream from the intermediary melt passage (figure 4); for the upstream melt passage and the at least one intermediary melt passage, a flow path for orienting the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (column 5, lines 1 – 19); and a plurality of hot runner nozzles in communication with and downstream from the downstream melt passages (column 3, lines 5 – 10); wherein the apparatus is further comprised of a manifold having the hot runner system (column 3, lines 5 – 10).

With respect to claims 11 – 16, the reference also teaches that the flow is non-planar (column 5, lines 10 – 20); wherein the flow path comprises a sufficient amount of bending to rotate the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (figure 4); wherein the apparatus is further comprised of a flow rotator for installing in the hot runner system to provide a bending portion of the flow path (item 36 – figure 1); wherein the bending portion comprises a sufficient amount of bending to rotate the cross-sectional asymmetric condition of the laminar flowing material in the at least one

intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (figure 4; column 5, lines 10 – 20); wherein the flow rotator receives the laminar flowing material from the upstream melt passage (column 4, lines 65 – 67); the bending portion comprises a pair of downstream outlets and a branch for bifurcating the bending portion into the pair of downstream outlets (figure 4); the pair of downstream outlets comprises a distinct associated downstream outlet for the at least one intermediary melt passage (figure 4); for the at least one intermediary melt passage, the distinct associated downstream outlet discharges the laminar flowing material into the intermediary melt passage (figure 4; column 6, lines 1 – 15); and for the at least one intermediary melt passage, the distinct associated downstream outlet is oriented relative to the intermediary melt passage to rotate the cross-sectional asymmetrical condition of the laminar flowing material such that the cross-sectional asymmetric condition is substantially equally divided between the associated two downstream melt passages (column 5, lines 1 – 20; column 6, lines 1 – 20); wherein the flow-rotator receives the laminar flowing material from the intermediary melt passage and discharges the laminar flowing material into the intermediary melt passage (figure 4; column 6, lines 60 – 67).

With respect to claims 19 – 23, Bouti teaches in a hot runner system for supplying a laminar flowing material, the hot runner system having an upstream melt passage (figure 4), a pair of intermediary melt passages downstream from the upstream melt passage and for at least one intermediary melt passage, an

associated pair of downstream melt passages downstream from the at least one intermediary melt passage (figure 4); a flow rotator for rotating a cross-sectional asymmetrical condition of a laminar flowing material in the hot runner system (item 36– figure 1), the flow rotator comprising: an inlet for receiving the laminar flowing material (figure 1); at least one outlet for discharging the laminar flowing material (figure 1); and a bending path for orienting the at least one outlet relative to the inlet to rotate the cross-sectional asymmetrical condition of the laminar flowing material such that the cross-sectional asymmetrical condition is substantially equally divided between the two downstream portions (figure 4; column 5, lines 1 – 20); wherein the at least one outlet is positioned to discharge the laminar flowing material into the at least one intermediary melt passage, and is oriented relative to the at least one intermediary melt passage such that the cross-sectional asymmetrical condition in the at least one intermediary melt passage is substantially equally divided between the associated pair of downstream melt passages (column 5, lines 1 – 20); wherein the at least one outlet comprises a pair of outlets; and each outlet in the pair of outlets, is positioned to discharge the laminar flowing material into an associated intermediary melt passage in the pair of intermediary melt passages, and is oriented relative to the associated intermediary melt passage such that the cross-sectional asymmetrical condition in the associated intermediary melt passage is substantially equally divided between the associated pair of downstream melt passages (column 5, lines 1 – 20; column 6, lines 1 – 20); wherein the bending path is offset from a plane including the upstream melt passage, the pair of

intermediary melt passages downstream from the upstream melt passage, and the associated pair of downstream melt passages for each intermediary melt passage (figure 4); wherein the bending path comprises a sufficient amount of bending to rotate the cross-sectional asymmetrical condition such that the cross-sectional asymmetrical condition is substantially equally divided between the two downstream portions (figure 4; column 4, lines 65 – 67; column 5, lines 1 – 20).

Claims 8 – 9 and 11 – 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Swaroop (U.S. 4,299,553). Swaroop teaches an injection molding apparatus comprising: a hot runner system for supplying a laminar flowing material, the hot runner system having an upstream melt passage (column 1, lines 5 – 10), a plurality of intermediary melt passages downstream from the upstream melt passage (column 1, lines 45 – 50), and for at least one intermediary melt passage, an associated pair of downstream melt passages downstream from the intermediary melt passage (column 1, lines 45 – 50); for the upstream melt passage and the at least one intermediary melt passage, a flow path for orienting the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (column 1, lines 45 – 50); and a plurality of hot runner nozzles in communication with and downstream from the downstream melt passages (column 1, lines 5 – 10); wherein the apparatus is

further comprised of a manifold having the hot runner system (column 1, lines 50 – 55).

With respect to claims 11 – 14, the reference further teaches that the flow is non-planar (column 3, lines 40 – 50); wherein the flow path comprises a sufficient amount of bending to rotate the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (figure 2; column 2, lines 5 – 20; column 3, lines 40 – 52); wherein the apparatus is further comprised of a flow rotator for installing in the hot runner system to provide a bending portion of the flow path (item 22 – figure 2; column 2, lines 55 – 67); wherein the bending portion comprises a sufficient amount of bending to rotate the cross-sectional asymmetric condition of the laminar flowing material in the at least one intermediary melt passage such that the cross-sectional asymmetric condition is substantially equally divided between the associated pair of downstream melt passages (column 2, lines 60 – 68; column 3, lines 1 – 5, 35 – 52).

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Veronica D. Ewald whose telephone number is 571-272-8519. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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